REPORT OF THE HEALTH OFFICER OF BANGALORE CITY FOR THE OFFICIAL YEAR ENDING 30TH JUNE 1910, (1909-10)

BY A. K. PANI, L.M.S., D.P.H., ETC.

During the year under report, Mr. B. Krishna Rao, L.M.S., L.S.Sc., continued to act as Health Officer from the commencement of the year up to 4th February 1910 and handed over charge of the office to Mr. A. K. Pani, the permanent incumbent on the forenoon of the 5th February 1910.

The Health Officer continued to be *ex-officio* Vice-President in matters relating to Public Health and an *ex-officio* member of the Municipal Council, as sanctioned in Government Proceedings Nos. 6483-6—Ml. 127-07-13, dated 12th January 1909 and 3633—Ml. 52-09-3, dated the 14th October 1909, respectively, and also a member of the committee appointed in Government Proceedings No. 5352-3—Ml. 143-08, dated 4th December 1908, to draw up a scheme for the improvement of City with a view to relieve congestion.

During the year under report, the Government in their Notification No. 6881—San. 106-07, dated 8th February 1910, conferred on the Municipal Council all the powers specified under sub-section 2 of Section 144 of the Municipal Regulation, regarding the prevention of dangerous diseases.

Government in their Proceedings No. 12364—San. 196-08-2, dated 9th June 1909, ordered that vaccination should be compulsory for a further period of a year from 1st July 1909, in continuation of a year sanctioned in Notification No. 12698—Medl. 67-07-11, dated 5th June 1908.

Government in their Notification No. 9987—Ml. 397-08-7, dated 4th May 1910, declared that sub-section 2 of Section 142 of the Municipal Regulation, be made applicable to certain articles of food and drink therein mentioned.

The following bye-laws framed under Section 48 (1) of the Municipal Regulation are pending sanction of Government.

1. Rules for regulating bakeries, sweetmeat shops, native hotels, manufacture, preparation and sale of articles of drink;

2. Regulation of structures and buildings.

VITAL STATISTICS.

Statements are appended with diagrams in the forms of curves showing rise and fall quarterly comparing with the previous year, for ready and easy reference.

It is to be noted that the rates are worked out on the last Census population but not on the estimated population at the middle of the year on account of recurring epidemic of plague year after year, having raised the death-rate considerably higher than the birth-rate.

Registration of Births and Deaths.—The total number of births registered during the year under report was not so satisfactory as it ought to be owing to the ignorance on the part of the public of the rules recently passed by Government making Registration of Births and Deaths compulsory.

It would take some time more to arrive at the correct Registration of Births and Deaths and to enforce the bye-law in its entirety. The total number of deaths is correct on account of strict supervision exercised over burial and cremation grounds and prosecutions instituted in few cases against those who failed to register deaths within a day as required by the bye-law.

Births.—The births registered during the year 1909-10, exclusive of still-births numbered 1,985 against 2,137 in the previous year. Of these 1,044 males and 941 females against 1,119 males and 1,018 females respectively in the previous year. The rate per 1,000 living calculated on the last Census population for the year under report was 28·5 against 30·7 of last year *vide* Statement A.

Statement No. 1 and Diagram No. 1.—Diagram compares in the form of curves birth and death-rates with those of the previous year quarterly. It will be seen that the birth-rate curve is considerably below the death-rate curve owing probably to the non-registration of all the births that took place.

Statement No. 3 and Diagram No. 3.—Show the birth rates quarterly according to Municipal Divisions. It will be seen in the diagram that the curve of 4th Division is pretty high owing mostly to the existence of Maternity Hospital and partly to the division being thickly populated.

Statement No. 3 and Diagram No. 3.—The order of Divisions according to birth-rates for the year under report was as follows:—

1st	...	4th Division.
2nd	...	7th and 8th Divisions.
3rd	...	2nd Division.
4th	...	3rd Division.
5th	...	5th Division.
6th	...	1st and 9th Divisions.
7th	...	6th Division.

The birth-rate of 4th Division is high owing to the inclusion of births in the Maternity Hospital, where number of births belonging to various Divisions of the City and probably belonging to outside limits are also registered in the Division, besides being thickly populated.

According to Nationality.—The births registered among Hindus during the year were 1,742; among Mahomedans 131; among Native Christians 72; among Eurasians 30; and among Europeans 10.

The ratio being 30·2 among Hindus; 15·2 among Mahomedans 26·3 among Native Christians; 111·9 among Eurasians; and 40·6 among Europeans. *Vide* Statement A.

Still-births.—There were 84 still-births in the year under report against 41 in the previous year, showing a proportion of 4·2 per cent of the live births.

The high percentage of still-births is mostly due to the women in labour, being attended to by unqualified Midwives (barber women) and the elderly old women who profess to be Midwives. To throw the Municipal qualified Midwives more at the disposal of the public, signboards are put up this year in all the Dispensaries that their services are obtained free and to know their residence another signboard is put up against their houses.

Deaths.—The total number of deaths for the year was 3,155 including deaths from plague; of these 1,639 males 1,516 females with a ratio of 45·4 per 1,000 living against 49·0 in the previous year, showing a decrease of 3·6 which is due to plague having broken out in a milder form than in the previous year.

The total deaths excluding plague was 3,058 against 3,219 in the previous year, giving a ratio of 44·03 against 46·3. The rate 44·03 per 1,000 living ought to have been the legitimate annual death-rate but for plague.

Statement No. 1 and Diagram No. 1.—Show quarterly death-rates. It will be seen that the death-rate curve has fallen down gradually in the 2nd, 3rd and 4th quarters.

Statement No. 4 and Diagram No. 4.—Show quarterly death-rates according to Divisions. It will be seen in the Diagram that the curve of 7th Division is pretty high in the first quarter and has dropped down in the second quarter.

The death-rate curve of 7th Division has gone high in the first quarter owing to the inclusion of deaths that occurred in the Victoria Hospital, belonging to various divisions and also non-residents of the City. Arrangements having been made in the second quarter to distribute such deaths to various Divisions concerned, the curve has dropped down in the remaining quarters of the year.

According to Nationality.—The deaths registered among the Europeans during the year were 9; among Eurasians 24; among Native Christians 136; among Mahomedans 392; and among Hindus 2,594; the ratio being 36·5 among Europeans; 89·5 among Eurasians; 50·4 among Native Christians; 45·7 among Mahomedans and 44·9 among Hindus *vide* Statement A.

The following is the order of deaths arranged according to different age periods :—

		Deaths.
1st	under 1 year	833
2nd	above 60 years	488
3rd	21 to 30 years	357
4th	2 to 5 years	346
5th	12 to 20 years	291
6th	31 to 40 years	227
7th	41 to 50 years	223
8th	51 to 60 years	197
9th	6 to 12 years	193

The heaviest mortality was as usual among infants under one year of age, returning 419·6 deaths per 1,000 births registered.

Statement No. 5 and Diagram No. 5.—Show deaths due to principal causes in descending order. The high mortality is due to Bronchitis and Infantile Convulsions.

Infant Mortality.—Statement No. 2 and Diagram No. 2 show infant mortality quarterly as compared with previous year 1908-09. There were 833 deaths among children under one year against 925 in the previous year. The deaths were mostly due to premature births and infantile convulsions. The infant death rate for the year under report is 419·6 per 1,000 births registered against 432·8 in the previous year. The infant death rate is generally high in the City.

Taking the local conditions of the City into account, the infantile death-rate under 12 months should not exceed 100 per 1,000 births, whereas it is 419·6 for the year.

It is shocking to find nearly more than a third of the new-born dying away before they could count upon a year and as this is the chief index of the sanitary condition of the City, it can very well be inferred how very insanitary the City proper is. The insanitation in City proper is due to ill-ventilated houses being packed together in narrow lanes with defective drainage. One of the chief remedies to prevent the high infant mortality is to improve the City proper once for all as early as possible instead of slow patch work here and there. The financial condition of the council being very poor, the council would do very well to raise a loan of at least 8 lakhs of Rupees and improve the City quickly to save the infants who if survived would keep up balance and even over-weigh the general death-rate which ought to be in all prosperous Cities.

The principal causes seem to be due to the following as pointed out in the report of the year 1907-08 :—

(1) Early marriages and weakly parents.
(2) Insanitary surroundings due to accumulation of both solid and liquid refuses, etc.
(3) Improper feeding, this includes adulterated and highly polluted milk.
(4) Insufficient clothing and exposure and
(5) Hereditary tendencies with a history of Syphilis, Scrofula, etc.

The number of prosecutions instituted during the year for failing to register births and deaths within the time allowed by the bye-law was 7. In 4 cases, conviction was obtained and the remaining cases are pending disposal. The total amount of fines imposed was Rs. 2-4-0.

During the year under report the number of applications received for extracts from the register of births was 3 and from the death register 96. Of these 2 extracts of births and 93 of deaths were granted.

Plague.—*Vide* special report for the corresponding year under report submitted to the President, City Municipal Council.

Plague broke out at the beginning of the official year and kept on till April 1910. The total number of attacks and deaths was 128 and 97 against 246 and 185 respectively in the year previous.

The usual preventive measures such as destruction of large number of rats (2,09,299 against 1,50,139) and disinfection of infected houses were adopted. As compulsory segregation of patients and contacts are not in force, the persons concerned were advised and persuaded and whoever were willing removed to Isolation Hospital.

Inoculation.—The number of persons inoculated during the year under report by the two Inoculating Officers temporarily appointed for the purpose and by the Health Officer was 6,435 against 257 in the previous year and the amount of reward paid to poor persons at annas 4 for adults and annas 2 for children was Rs. 1,110-4-0. It is worthy of note that Municipal Councillors Messrs. Mahomed Gouse Razvi Saib and Audiappa, evinced great interest in persuading people to avail themselves of the advantage of being inoculated by offering grain doles, etc., to the poor besides reward.

Cholera.—There were 25 attacks and 23 deaths from cholera for the year under report. Of these 11 were reported to be imported from Kengari, Nanjangud and Dodballapur and those that were willing were removed to the Infectious Diseases Hospital. The out-break having become known at its commencement and the seasonal condition not being favorable to its spread, the necessary preventive measures adopted on the occasion, brought the disease under control.

Small-pox.—There were 52 attacks and 29 deaths from small-pox in the year under report. The disease broke out in a sporadic form in different parts of the City. Some of the patients and contacts who consented to go to the Infectious Diseases Hospital, were admitted and the usual preventive measures such as vaccination and disinfection were carried out.

CONSERVANCY AND GENERAL SANITATION.

The conservancy and scavenging of the whole City are being solely supervised by one unqualified Senior Sanitary Inspector. Out of the three qualified Sanitary Inspectors, two are attending to internal sanitation and one devotes all his time to cess collection work, a work which should entirely be outside the zone of this Department.

The number of toties and sweepers engaged were 126 and 244 respectively. This number being inadequate to cope with the work, an additional staff consisting of 12 toties and 8 sweepers was provided for in the budget of 1909-10 and Government sanction was obtained for their entertainment in the latter part of the year, for conserving the drains and latrines in the City and in the extensions recently handed over by the Sanitary Engineering Department.

Internal sanitation of the City is looked after by 2 qualified Sanitary Inspectors who move about in their area and make house to house visit noting the sanitary defects found therein, for the purpose of issuing notices to abate such defects. A perusal of the statement No. B shows the work done by the Sanitary Inspectors. From which, it can be seen that almost every other premises visited by them has some nuisance or other especially in the City proper.

Close and extended acquaintance with the general sanitary condition of the City and its people would lead one to conclude that ample work exists for four more Sanitary Inspectors.

Excluding one qualified Sanitary Inspector deputed for cess collections, the remaining three have visited 5,597 premises in the year and found 2,000 houses wherein sanitary defects existed.

1,926 notices were issued under different sections of the Municipal Regulation, out of which 674 were complied with and prosecutions instituted in 150 cases against 58 in the year previous. Of these 101 were for not closing cesspits, 12 for not providing house connection drains; 9 for building without license; 7 for not removing

rank vegetation and the remaining 21 for failure to abate other nuisances. *Vide* Statement C.

Statement D shows the details of nuisances abated under different sections of the Municipal Regulation. The night-soil and street refuse were leased out to private contractors who cart the same to their fields outside the City limits with sufficient number of carts.

138 dustbins were purchased and distributed among several divisions during the year.

Removal of congestions.—Although the total area included within Municipal limits is extensive when compared with the population occupying it, yet overcrowding does occur to a considerable degree in the heart of the City proper. In 2nd, 3rd and 4th Divisions the houses are so closely packed that majority of houses are occupied by more than one family. The Municipal Council is making a move in the way of opening out congested portions by acquiring lands and opening new lanes, etc.

Mosquito destruction.—Systematic oiling of pools and ponds that cannot be drained or filled up in the City limits, with gas works liquid-waste and kerosene oil was introduced in the latter part of the year. The staff of this department during their rounds try to educate the public all about mosquitoes.

Vaccination.—This continued to be compulsory during the year under report. There were two vaccinators and a vaccinatrix moving round the City, and vaccination was also done in all the Municipal and Government Dispensaries in the City. The number of cases vaccinated during the official year 1909-10 by the vaccinators as well as by the Registrars of Births and Deaths in charge of dispensaries was 2,482 against 3,920 in the previous year; of these 2,083 were successful and in the remaining cases results could not be verified and are shown as unknown. *Vide* Statement E.

Work done by Municipal Midwives.—There were 6 qualified midwives in the City. The number of labour cases conducted in the year was 357 when 1,985 births were registered in the same year. In only 17 per cent of the births, aid of qualified midwives was sought for and the rest were managed by unqualified midwives. This is no doubt one of the main causes for still-births. If the qualified midwives were to attend on all labour cases, they would be able to perform artificial respiration, on new-born infants when they are still and breathless in most cases. *Vide* Statement F.

Dispensaries.—There were 3 Municipal and 2 Government Dispensaries in the City. The Hospital Assistants in charge of these continued to act as Registrars of Births and Deaths with a subordinate staff to assist them in this work.

In the year under report, the public water-supply has been much improved by the substitution of Jewell filters in place of sand filters which is decidedly a better filter for the supply, which occasionally becomes very muddy during and after rains. The supply is regularly being examined by the Government Bacteriologist once a week and reports sent to the Sanitary Commissioner. The standard of purity has been good and has improved considerably ever since the introduction of Jewell filter.

The most urgent needs for the City are :—

I. Providing uniforms to Sanitary Inspectors.

II. Increasing the number of qualified Sanitary Inspectors.

III. Placing large sum of money at the disposal of the council for the speedy improvement of the City proper.

IV. Providing model dairies and bringing other dairies under control.

V. Registration of "dhobies" and construction of model "dhobikhanas."

VI. Providing an up-to-date steam disinfector in a building specially built for the purpose.

VII. Providing horse model ambulance for conveyance of patients to Infectious Disease Hospital.

The special recommendation for the above will follow from time to time as the funds are available.

A. K. PANI,
Health Officer.